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Corrigendum

Corrigendum to "Minimal cyclic codes of length $p^n q$" [Finite Fields Appl. 9 (4) (2003) 432–448] ☆

Gurmeet K. Bakshi, Madhu Raka *

Centre for Advanced Study in Mathematics, Panjab University, Chandigarh-160014, India

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On p. 447 of our paper 'Minimal cyclic codes of length $p^n q$' (Finite Fields Appl. 9 (4) (2003) 432–448), there is an error in calculating the minimum distance of the code $\mathcal{C}_i$. The lines 11–15 on p. 447 should read as follows:

Let $\mathcal{C}_i$ be the code of length $p^{n-i}q$ generated by $g(x) = (x^{p^{n-i-1}q} - 1)(1 + x^{p^{n-i-1}} + \cdots + x^{(p-1)p^{n-i-1}})$. The minimum distance d_i of $\mathcal{C}_i$ is at most 4, as the codeword $g(x)(x-1) = (x^{p^{n-i-1}q} - 1)(x^{p^{n-i}} - 1) = x^{p^{n-i-1}(p+q)} - x^{p^{n-i-1}q} - x^{p^{n-i}} + 1$ in $\mathcal{C}_i$ has weight 4. By Lemma 10, $\hat{\mathcal{C}}_i$, the code of length $p^n q$, generated by $\frac{(x^{p^n q}-1)}{M^{(p^i)}(x)M^{(ap^i)}(x)}$ is a repetition code of $\mathcal{C}_i$ repeated p^i times and its minimum distance is $d_i p^i$. The minimal codes $\mathcal{M}_{p^i}$ and $\mathcal{M}_{ap^i}$ being subcodes of $\hat{\mathcal{C}}_i (= \mathcal{M}_{p^i} \oplus \mathcal{M}_{ap^i})$, have minimum distance at least $d_i p^i$.

On p. 448, the minimum distance of the minimal codes $\mathcal{M}_1$ and $\mathcal{M}_2$ should read as 12 instead of 18, as displayed in the table. This has been verified by the software magma.

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* Corresponding author.
E-mail addresses: gkbakshi@pu.ac.in (G.K. Bakshi), mraka@pu.ac.in (M. Raka).

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